Department of Transportation
Intelligent Transportation System Projects

The Department of Transportation has been working on three Intelligent Transportation System (ITS) intermodal freight projects in coordination with the Secretary's Office of Intermodalism. The three projects are Air Cargo Electronic Supply Chain Manifest, Electronic Seal System for Container Movement, and Asset Cargo Tracking.

All three projects were originally designed to improve various aspects of freight mobility and efficiency. However, all three have as part of their design the ability to pinpoint location of freight assets and cargo based upon the latest reporting point. This can be either with fixed-point, land-based readers, global positioning satellite readers, cellular network readers, or a combination of the three.

If we are lacking knowledge related to the contents of a container or a trailer at anytime or anywhere in the US, each of these projects has features that will help us to advance to meeting that objective.

The **Air Cargo project** is designed to handle chain of custody of cargo from its origination at a manufacturer/shipper to its end destination at the receiving air cargo facility or at the end destination customer. In route the originator, carrier and receiver of the goods uses a smart card to hand-off the freight between custodians. The smart card contains the biometric identifier of a thumb-print, the electronic manifest and an image of the driver's commercial driver license. All data is stored in a central server and is accessible through the internet.

The **Electronic Seal project** is designed to track containers in-bond from the point of inspection to the destination of the container, through seaports and across land border crossings. The e-seal is a radio frequency device that emits a signal as it passes reader devices, and will display information as to whether or not tampering has occurred with the container.

The **Asset Cargo Tracking project** is designed primarily to track the chassis, that containers ride on, anywhere in the US. It also is designed for the chassis to know when a container is on it, and when it is tethered to a truck tractor. The information on location of chassis can be sent to a central data processing point by way of radio frequency identification (transponder), cellular signal or global positioning system signal (satellite). If the container is equipped with a radio frequency device (transponder), the chassis tracking device will read the tag and can convey cargo information to a central data processing point. This project is expanding to include testing of e-seals.

All three of these projects hold promise toward helping the US meet a security objective of establishing an information system that will help those with a need-to-know what is on a container or trailer at any time, anywhere.

For more information on these projects contact Mike Onder, DOT Office of Freight Management and Operations, (202) 366-2639.